

34. The semiconductor package of Claim 32 or 33, wherein the glass sheet has a coefficient of thermal expansion that is substantially the same as the coefficient of thermal expansion of the semiconductor wafer.

35. The semiconductor package of Claim 32 or 33, wherein the semiconductor wafer is silicon.

36. The semiconductor package of Claim 32 or 33, wherein the first conductive layer is a metal selected from the group consisting of aluminum, nickel, gold, or copper.

37. The semiconductor package of Claim 32 or 33, wherein the second conductive layer is a metal selected from the group consisting of aluminum or gold.

38. The semiconductor package of Claim 32 or 33, wherein the second conductive layer is a conductive polymer.--

**Remarks**

***Claim Rejections Under 35 U.S.C. §103***

The Examiner has rejected Claims 4, 6, 7, 15 and 17 as being unpatentable over Lin in view of Tsukamoto and Igarashi et al. Claims 4, 6, 7, 15 and 17 have been cancelled. Claims 18 through 39 have been added. New Claims 18 – 38 have been drafted to more fully describe the invention and with regard to the discussions of September 14, 2000 Telephone Interview. It is respectfully submitted that Claims 18 – 39 are patentable over the cited prior art.

New independent Claim 18 claims the entire packaged semiconductor wafer. Claim 18 shows that the claimed invention is

New independent Claim 25 claims a glass sheet with first and second sides. Conductive material is deposited on the first side of the glass sheet while the second side of the glass sheet is adhered to the semiconductor wafer. None of the cited references show such a structure.

New independent Claim 32 claims a non-conductive mask on top of the first and second conductive layer. This mask is etched and the solder balls are placed on the etched areas. None of the cited references show such a structure.

In his May 3, 2000 Office Action, the Examiner states that U.S. Patent No. 5,258,648 to Lin (the "Lin '648 patent") shows a flip chip device (see Figure 5 and column 5, line 15) with a semiconductor chip 12 attached to an interposer board 22. The Examiner further states that Lin shows the interposer board attached to a PC board with a layer of adhesive 36 but does not show a similar attachment between 12 and 22, nothing that while it is standard practice (column 2, line 22) it prevents rework. The Examiner noted that if rework is not an issue, bonding is recommended.

It is respectfully submitted that the Lin '648 patent does not teach, disclose, or suggest bonding the semiconductor die to the interposer. In fact, Lin '648 teaches away from bonding the semiconductor die to the interposer stating that the advantage of the device taught in the patent is the fact that the semiconductor die is not affixed to the interposer:

The use of an underfill material in conventional flip chip devices prevents rework since the underfill materials commonly used, for example thermally conductive epoxies, cannot be reflowed. In an embodiment of the present invention, an underfill material can be used between interposer 22 and PC board 34. Once attached to PC

interposer 22, the device can be reworked by heating and reflowing solder bumps.

See Lin '648 patent Column 5:31-41. The above quotation from the Lin '648 patent clearly states that the device disclosed in Lin '648 does not have the semiconductor die adhered to the interposer. Nowhere in Lin '648 is it taught, disclosed or suggested that the semiconductor die should be bonded to the interposer.


For all of the above reasons, it is respectfully submitted that Claims 18-39 are patentable over the cited prior art.

**Conclusion**

For all the reasons set forth above, Applicant respectfully submits that Claims 18 - 38 are in condition for allowance and respectfully request that an allowance of all pending claims be granted.

Respectfully submitted,  
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